



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0689; Product Identifier 2018-CE-016-AD]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Gulfstream Aerospace Corporation (Gulfstream) Models G-IV and GIV-X airplanes. This proposed AD was prompted by reports of disbonding and surface cracking of the composite aft pressure bulkhead. This proposed AD would require inspections of the forward and aft surfaces of the pressure bulkhead composite panels for damage and repair of any damage found. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, Georgia 31402-2206; telephone: (800) 810-4853; fax 912-965-3520; email: pubs@gulfstream.com; Internet: http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm. You may view this service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0689; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: William O. Herderich, Aerospace Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5547; fax: (404) 474-5605; email: william.o.herderich@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0689; Product Identifier 2018-CE-016-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

We received reports of disbonding and accompanying surface cracking of the composite aft pressure bulkhead on Gulfstream Model G-IV airplanes. Gulfstream Model GIV-X airplanes have the same type design. During scheduled maintenance, areas with disbonding and accompanying surface cracks were found. Operational pressure loads by-passing the disbonded facesheet caused wrinkling or compression failure and led to the surface cracking. This condition, if not addressed, could result in structural failure of the bulkhead and loss of cabin pressure.

Airplanes maintained under Gulfstream’s Maintenance Steering Group (MSG-3) maintenance program do not have a scheduled tap test inspection of the aft pressure bulkhead. Model G-IV airplanes with a serial number (S/N) 1400 through 1535, and Model GIV-X airplanes with a S/N 4001 through 4004 adopted the MSG-3 maintenance

program in production. Airplanes produced earlier may change to the MSG-3 program by following the instructions in Aircraft Service Change (ASC) No. 416A, dated September 29, 2000.

Related Service Information under 1 CFR part 51

We reviewed Gulfstream G300 Customer Bulletin Number 243; Gulfstream G350 Customer Bulletin Number 198; Gulfstream G400 Customer Bulletin Number 243; Gulfstream G450 Customer Bulletin Number 198; and Gulfstream IV Customer Bulletin Number 243; all dated January 25, 2018. For the applicable airplanes, the service information describes procedures for inspecting the composite panels of the forward and aft pressure bulkhead for damage and repairing any damage found. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

We also reviewed ASC No. 416A, dated September 29, 2000, which contains instructions for changing the maintenance program for Model G-IV airplanes from the airplane's existing program to the MSG-3 maintenance program.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously.

Costs of Compliance

We estimate that this proposed AD affects 709 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	18 work-hours X \$85 per hour = \$1,530	Not applicable	\$1,530	\$1,084,770

The extent of damage found during the proposed inspection may vary from airplane to airplane. We have no way of determining the number of airplanes that might need repairs or the cost of such repairs for each airplane.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to small airplanes, gliders, balloons, airships, domestic business jet transport airplanes, and associated appliances to the Director of the Policy and Innovation Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Gulfstream Aerospace Corporation: Docket No. FAA-2018-0689; Product Identifier 2018-CE-016-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the following Gulfstream Aerospace Corporation airplanes, certificated in any category:

(1) Model G-IV: serial numbers (S/Ns) 1000 through 1399 that are maintained in accordance with the Maintenance Steering Group (MSG-3) maintenance program by complying with Aircraft Service Change (ASC) 416A; and S/Ns 1400 through 1535.

(2) Model GIV-X: S/Ns 4001 through 4004.

Note 1 to paragraph (c) of this AD: Model G-IV airplanes are also referred to by the marketing designations G300 and G400. Model GIV-X airplanes are also referred to by the marketing designations G350 and G450.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53; fuselage.

(e) Unsafe Condition

This AD was prompted by reports of disbonding and surface cracking of the composite aft pressure bulkhead. We are issuing this AD to detect and address damage of the composite forward and aft pressure bulkhead. The unsafe condition, if not addressed, could result in structural failure of the bulkhead and loss of cabin pressure.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection

Within 12 months after the effective date of this AD, visually and tap inspect the forward and aft surfaces of the pressure bulkhead composite panels following the Accomplishment Instructions of the service information listed in paragraphs (g)(1) through (5) of this AD, as applicable to your model airplane.

- (1) Gulfstream G300 Customer Bulletin Number 243, dated January 25, 2018;
- (2) Gulfstream G350 Customer Bulletin Number 198, dated January 25, 2018;
- (3) Gulfstream G400 Customer Bulletin Number 243, dated January 25, 2018;
- (4) Gulfstream G450 Customer Bulletin Number 198, dated January 25, 2018;
- (5) Gulfstream IV Customer Bulletin Number 243, dated January 25, 2018.

(h) Repairs

If any damage is found during the inspections required by this AD, before further flight, replace or repair the pressure bulkhead composite panels in accordance with FAA-approved procedures.

(i) Special Flight Permit

A special flight permit may be issued per 14 CFR 21.197 and 21.199 to operate the airplane to a facility to perform the inspection required by paragraph (g) of this AD. If damage is found during the inspection required by paragraph (g) of this AD, a special flight permit may be issued per 14 CFR 21.197 and 21.199 to operate the airplane to a location for repair, provided the aircraft is unpressurized.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(3)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

(1) For more information about this AD, contact William O. Herderich, Aerospace Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: (404) 474-5547; fax: (404) 474-5605; email: william.o.herderich@faa.gov.

(2) For service information identified in this AD, contact Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, Georgia 31402-2206; telephone: (800) 810-4853; fax 912-965-3520; email: pubs@gulfstream.com; Internet: http://www.gulfstream.com/product_support/technical_pubs/pubs/index.htm. You may view this service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on July 20, 2018

Pat Mullen,
Aircraft Certification Service
Acting Deputy Director, Policy & Innovation Division, AIR-601

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